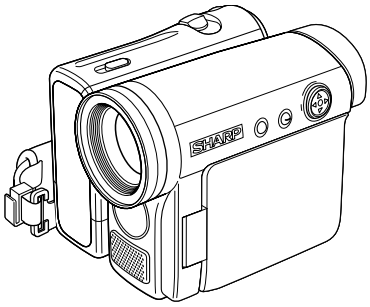
SHARP SERVICE MANUAL

1st Edition

LIQUID CRYSTAL DIGITAL CAMCORDER PAL



MODELS VL-Z3S/H/E VL-Z5S/H/E

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified be used.

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SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

1. SPECIFICATIONS

Signal System:	PAL standard
Recording System:	2 rotary heads, helical scanning system
Cassette:	Digital VCR Mini DV video cassette
Recording/Playback Time:	90 minutes (DVM60, LP mode)
Tape Speed:	SP mode: 18.831 mm/second LP mode: 12.568 mm/second
Pickup Device:	1/4" (6.4 mm, effective size: 4.5 mm) CCD image sensor (with approx. 800,000 pixels including optical black, effective pixels: approx. 414,000 pixels)
Lens:	10 × optical zoom lens (F1.8, f=3.8-38.0 mm)
Lens Filter Diameter:	30 mm
Monitor:	2.5" (6.4 cm) CGSilicon
Built-in Microphone:	Electret stereo microphone
Color Temperature Compensation:	Auto white balance with white balance lock
Minimum Illumination:	2 lux* (with gain-up, F1.8)
Still Image Compression System:	JPEG base line conformance
Still Image Recording Format:	JPEG (Exif2.2)
Still Image Recording Medium:	SD Memory Card, MultiMediaCard
Power Requirement:	DC 7.4 V
Power Consumption:	3.6 W (during camera recording in Tape Camera mode using the viewfinder in Full Auto mode with the DIS function on) 4.2 W (during camera recording in Tape Camera mode using the LCD monitor in Full Auto mode with the DIS function on and backlight in normal mode)
Operating Temperature:	0°C to +40°C
Operating Humidity:	30% to 80%
Storage Temperature:	–20°C to +60°C
Dimensions (approx.):	82.8 mm (W) × 82.2mm (H) × 101.5 mm (D)
Weight (approx.):	VL-Z5: 485 g VL-Z3: 478 g (without battery pack, lithium battery, video cassette, lens cap and card)

AC Adapter (UADP-A016WJZZ)

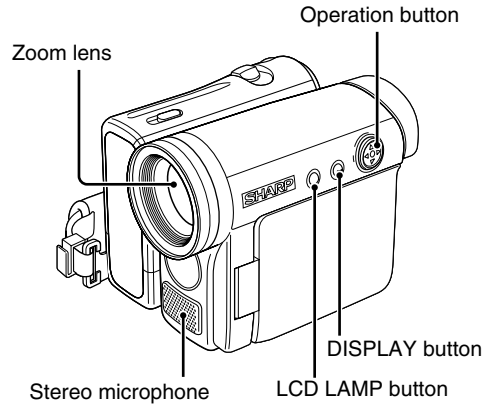
Power Requirement:	AC 110-240 V, 50/60 Hz
DC Output:	10 V
Dimensions (approx.):	49.0mm (W) × 27.5mm (H) × 79.0 mm (D)
Weight (approx.):	125 g

Specifications are subject to change without notice.

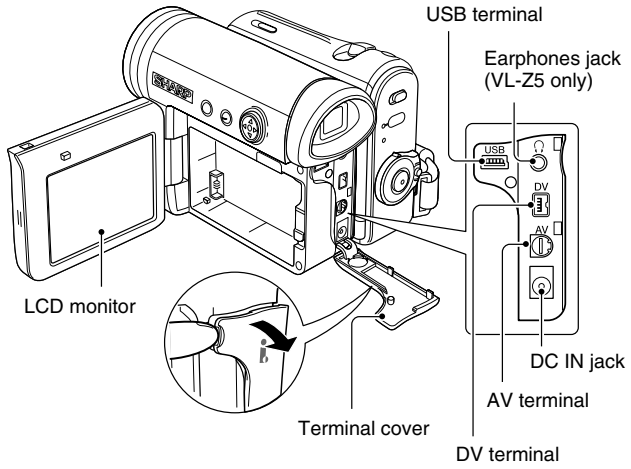
*Minimum illumination: Since there is no widely accepted testing procedure for determining minimum illumination capability, lux ratings are comparable only between models from the same manufacturer.

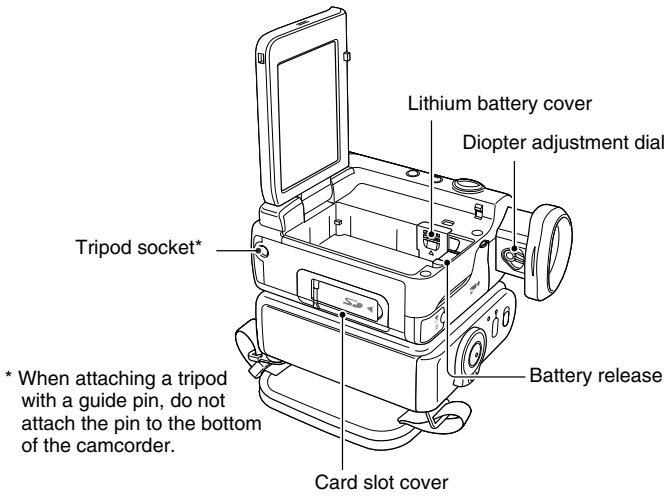
2. PART NAMES

Front view

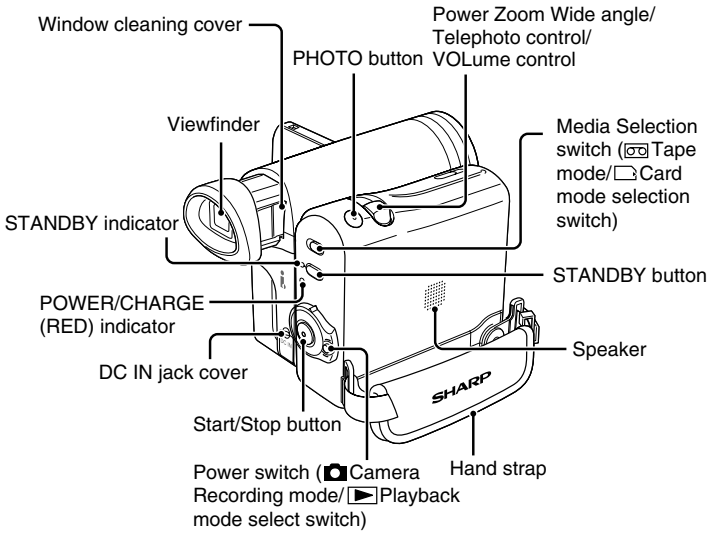


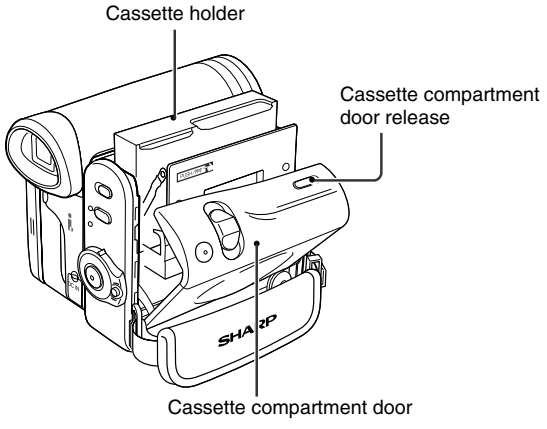
Left view




Lithium battery cover
Diopter adjustment dial
Tripod socket*
Battery release
* When attaching a tripod with a guide pin, do not attach the pin to the bottom of the camcorder.
Card slot cover

Right view





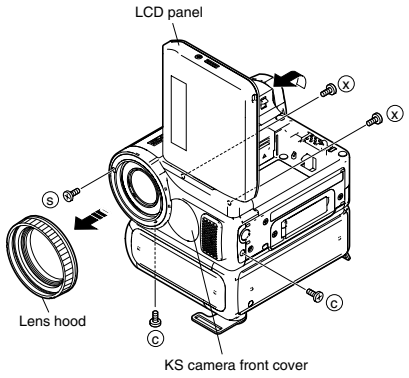
3. DISASSEMBLY OF THE SET

3-1. Procedure for disassembling the cabinet

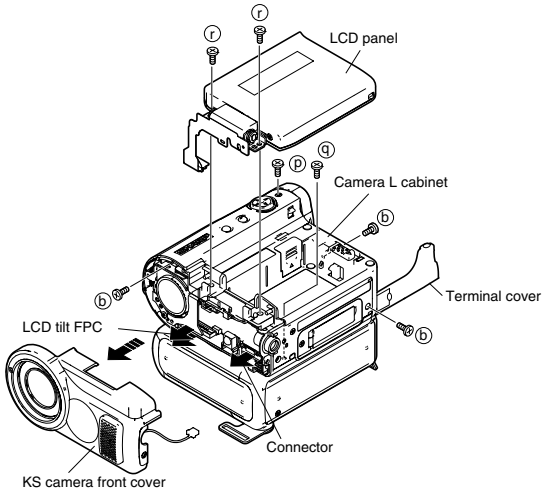
Note:

Before removing the cabinet, turn OFF the power and make sure that the battery is not connected.

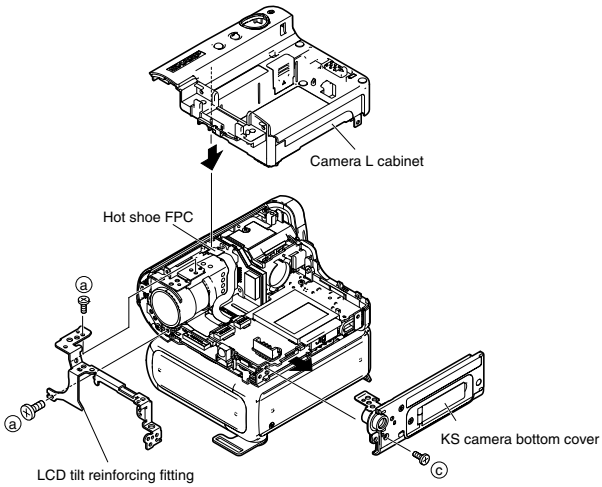
1.
- Remove the lens hood and remove the screw ((s) XiPSF14P06000).
- Open the LCD panel 90 degrees and remove the two screws ((x)LX-HZ0050TAFN).
- Remove the two screws ((c)XiPSN17P04000) and remove the KS camera front cover by pulling it frontward.



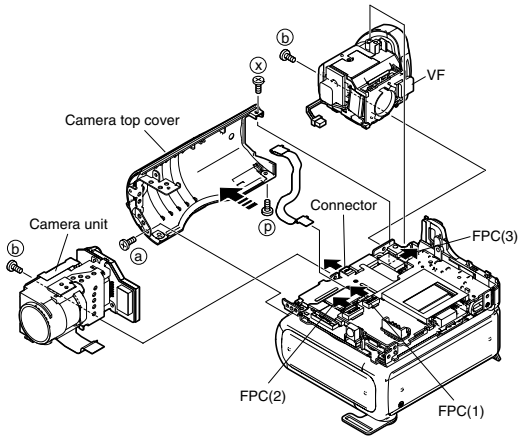
2.
- Disconnect the connector of the KS camera front cover.
- Disconnect the two LCD tilt FPCs of the liquid crystal panel.
- Remove the two screws ((r) XiPSN20P08000) and remove the LCD panel.
- Remove the screw ((p) LX-HZ0063TAFN) and screw ((q) XiPSN17P06000) that hold the camera L cabinet, open the terminal cover and remove the three screws ((b) XiPSN17P03000).



3.
- Disconnect the hot shoe FPC of the hot shoe and remove the camera L cabinet.
- Remove the screw ((c) XiPSN17P04000) and remove the KS camera bottom cover.
- Remove the two screws ((a) XiPSN17P02000) and remove the LCD tilt reinforcing fitting.

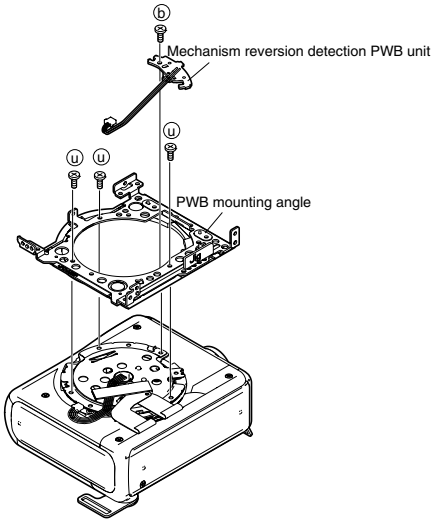


4.



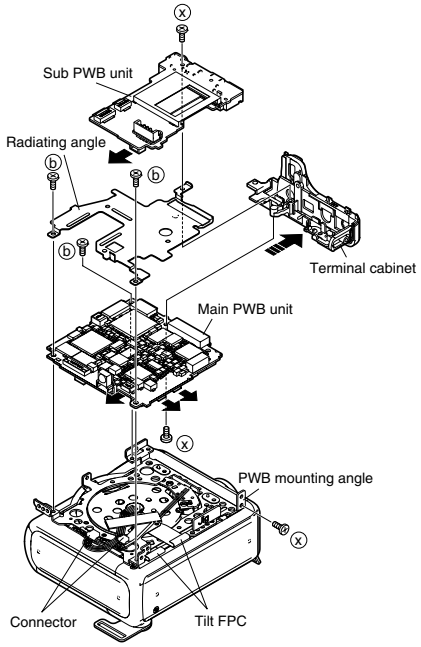
· Remove the screw ((x) LX-HZ0050TAFN), screw ((p) LX-HZ0063TAFN) and screw ((a) XiPSN17P02000), disconnect the FPC (1) and remove the camera top cover.
· Remove the screw ((b) XiPSN17P03000) from the camera unit, disconnect the FPC (2) and remove the camera unit.
· Remove the screw ((b) XiPSN17P03000), disconnect the connector and FPC (3) and remove the VF.

6.



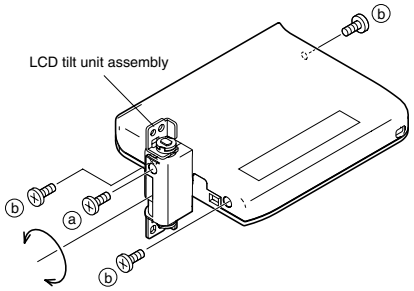
· Remove the screw ((b) XiPSN17P03000) and remove the Mechanism reversion detection PWB unit.
· Remove the three screws ((u) LX-BZ0221TAFC) and remove the PWB mounting angle.

5.



· Disconnect the two connectors of the sub PWB unit and main PWB unit.
· Remove the two screws ((b) XiPSN17P03000) from the radiating angle, remove the screw ((b) XiPSN17P03000) from the PWB unit and remove each unit.
· Disconnect the two FFCs of the main PWB unit.
· Remove the two screws ((x) LX-HZ0050TAFN), remove the screw ((x) LX-HZ0050TAFN) form the PWB mounting angle and remove the terminal cabinet.

7.

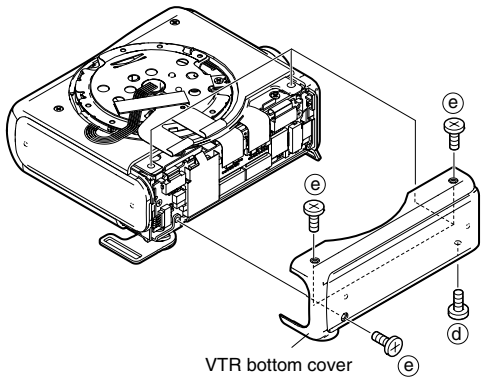


· Turn the LCD tilt unit assembly 90 degrees.
· Remove the three screws ((b) XiPSN17P03000).
· Remove the screw ((a) XiPSN17P02000).

3-2. Procedure for disassembling the cabinet

1.

· Remove the three screws ((e) XiPSF17P03000) , remove the screw ((d) XiPSF17P02000) and remove the VTR bottom cover.



2.

· Remove the two screws ((e) XiPSF17P03000) and remove the tilt cover.

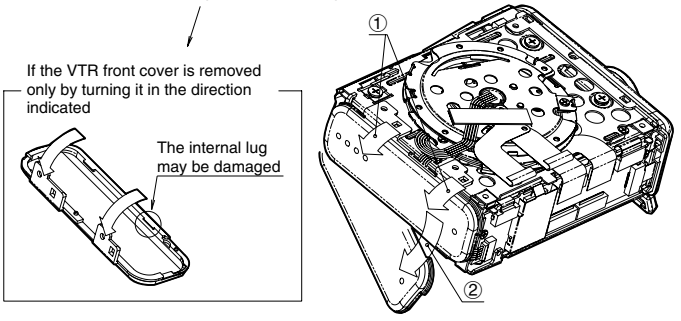
· Remove the VTR front cover with the cassette cover opened.

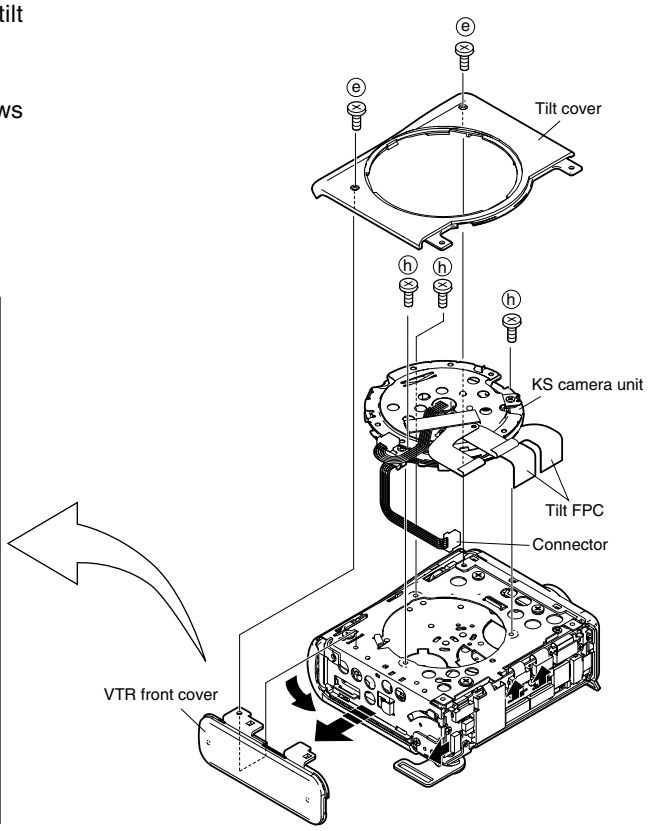
· Disconnect the connector and two tilt FPCs, remove the three screws ((h) LX-BZ0220TAFC) and remove the KS camera tilt.

How to remove the VTR front cover

1. Remove the two couplings and turn the VTR front cover about 20 degrees in the direction indicated by (1).
2. Turn the VTR front while sliding it in the direction indicated by (2) to disengage the internal lug.

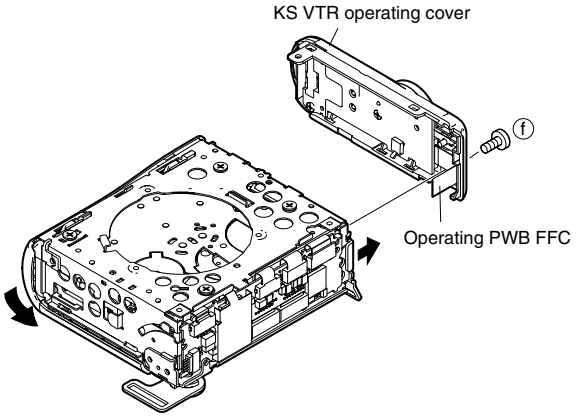
* If the VTR front cover is removed by turning it forcedly in the direction indicated by (1), the internal lug may be damaged.



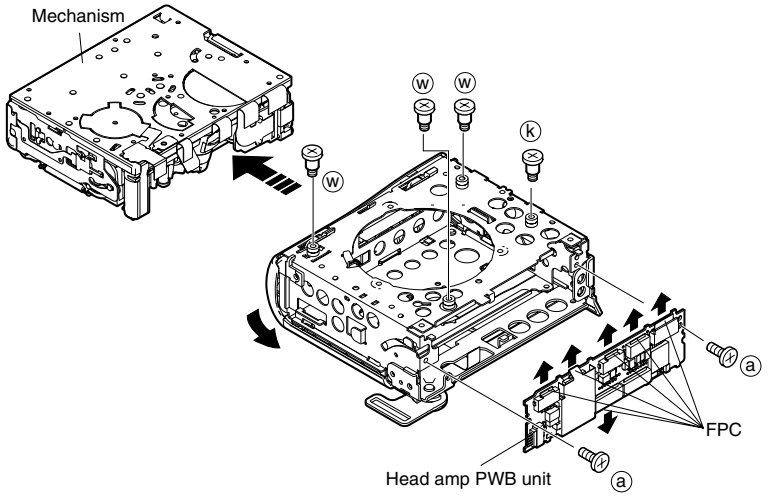


3.

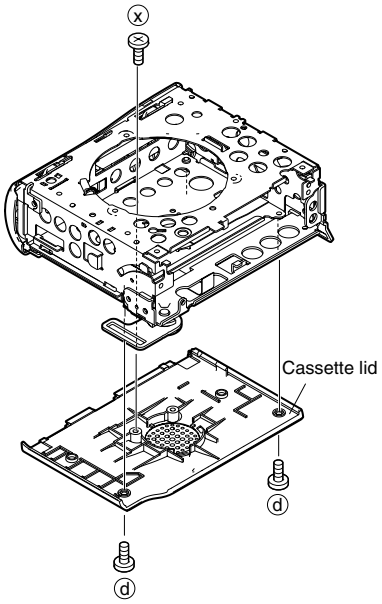
· Remove the screw ((f) XiPSF17P04000) with the cassette lid opened, disconnect the operation PWB FFC and remove the KS VTR operating cover.



4.
· Disconnect the six FPCs of the head amp circuit board unit.
· Remove the two screws ((a) XiPSN17P02000) and remove the head amp PWB unit.
· Remove the three screws ((w) LX-BZA022WJFN) and remove the screw ((k) LX-BZA023WJFD).
· Remove the mechanism with the cassette lid opened.



5.
· Remove the screw ((x) LX-HZ0050TAFN).
· Remove the two screws ((d) XiPSF17P02000) and remove the cassette lid.



6.
· Remove the two screws ((d) XiPSF17P02000).
· Disconnect the connector of the speaker while removing the KS upper lid cover with the cassette control lid opened.
· Remove the screw ((d) XiPSF17P02000) and remove the lock support cover.
· Remove the speaker.